No. 8000080

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Cargill, Incorporated

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Paymaster 145'

PLANT VARIETY PROTECTION OFFICE · U.S. DEPARTMENT OF AGRICULTURE

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 14th *day of* May *in the year of our Lord one thousand nine hundred and* eighty-one.

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

FOR OFFICIAL USE ONLY

PV NUMBER 8000080

1a. TEMPORARY DESIGNATION OF VARIETY: Paymaster 145, 145 106222-72	1b. VARIETY NAME: Paymaster 145
2. KIND NAME: Cotton	3. GENUS AND SPECIES NAME: Gossypium hirsutum
4. FAMILY NAME (BOTANICAL): Malvaceae	5. DATE OF DETERMINATION: September 1975
FILING DATE: 3/24/80	TIME: 1:30 A.M. (P.M.)
FEE RECEIVED: $ 500.00 / $ 250.00	DATE: 3/24/80 / 1/29/81

6. NAME OF APPLICANT(S): ~~ACCO SEED, a division of Anderson, Clayton and Company~~ CARGILL, Inc 8/12/80

7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*: ~~P.O. Box 1630 Plainview, Texas 79072~~ 15615 W. McGinty Rd Minnetonka Minn. 55343

8. TELEPHONE AREA CODE AND NUMBER: (806)652-3312

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*: Corporation

10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION: Delaware

11. DATE OF INCORPORATION: 1929

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: Dr. Hess ✓ ~~Dr. Delbert C. Hess, ACCO Seed, P.O. Box 1630 Plainview, Texas 79072 Phone (806) 652-3312~~ omit these lines Hess is representative / letter 8/15/80 DM

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [x] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [x] 13B. Exhibit B, Novelty Statement.
- [x] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [x] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [ ] YES [x] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? [ ] YES [x] NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [ ] YES [x] NO *(If "Yes," give name of countries and dates.)*

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? [ ] YES [ ] NO *(If "Yes," give name of countries and dates.)*

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [x] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

February 28, 1980
(DATE)

Delbert C. Hess
(SIGNATURE OF APPLICANT)

Delbert C. Hess
Director, Cotton Research, ACCO SEED

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (1-78)

MAR 24 1980

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 filing fee and $250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.

14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)

15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

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EXHIBIT A

Origin and Breeding History

Paymaster 145 traces back to a plant selection made from a breeding stock developed by Dr. Luther Bird of Texas A&M that was grown in the 1966 Paymaster Breeding nursery as $B_2B_3B_7$, 92KX61K (17M). Single plant selections were made at Plainview, Texas in 1966, Memphis, Texas in 1967, again at Memphis in 1968, at Plainview, in 1969 and 1970, and at Frost, Texas in 1971. The seed from progeny row 478 at Frost, Texas in 1972 were harvested and entered into the yield testing program in 1973.

Initial seed increases of Paymaster 145 were made during the winter of 1975-76. Residue seed from the 1972 Frost row 478 were used to plant this increase. A preliminary increase was grown from the self pollinated Mexico grown seed at Plainview in 1976 with subsequent increases being grown at several locations.

Paymaster 145 has been yield tested in ACCO Seed yield tests for six years and has been included in more that 25 tests during these years. The variety has been stable as is evidenced by its consistant performance and appearance during testing.

In seed increase fields, 95 percent of the flowers produced cream pollen whereas 5 percent of the flowers produced yellow pollen. Ninety seven percent of the plants are heavily pubescent, but the other 3 percent vary in the amount of pubescence that is present. In the process of maintaining this variety, an attempt will be made to have all cream pollen producing plants that are heavily pubescent.

EXHIBIT B

Novelty Statement

Paymaster 145 is most similar to Tamcot SP 21 in plant and growth characteristics. However, Paymaster 145 is novel and is different from Tamcot SP 21 in that Paymaster 145 (1) has pubescent stems and leaves, whereas those of Tamcot SP 21 are predominately glabrous (2) produces fiber that is shorter than that of Tamcot 21 (.991 vs 1.035 inches) and (3) produces fiber that has a higher micronaire than that of Tamcot SP 21 (4.46 vs 3.65 units).

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-8 (10-2-72)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C (Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON (*GOSSYPIUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
~~AGCO Seed~~ CARGILL, Inc 8/12/80

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
~~P.O. Box 1630~~ 15615 W. McGinty Rd.
~~Plainview, Texas 79072~~ Minnetonka, Minn. 55343

FOR OFFICIAL USE ONLY
PVPO NUMBER 8000080
VARIETY NAME OR TEMPORARY DESIGNATION
PAYMASTER 145

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. SPECIES:

[1] 1 = GOSSYPIUM HIRSUTUM 2 = GOSSYPIUM BARBADENSE

2. AREA(S) OF ADAPTION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

[0] EASTERN [0] DELTA [0] CENTRAL [2] HIGH PLAINS [0] EL PASO AREA
[0] WESTERN LOW HOT VALLEYS [0] SAN JOAQUIN [2] OTHER (*Specify*) Central Texas and Coastal Bend of Tex.

3. MATURITY (50% Open Boll):

[0][5] NO. OF DAYS *EARLIER* THAN . . . . . [4]
[ ][ ] NO. OF DAYS *LATER* THAN . . . . . [ ]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) _____

4. PLANT HABIT:

[2] 1 = SPREADING 2 = INTERMEDIATE 3 = COMPACT

[3] 1 = FOLIAGE SPARSE 2 = DENSE 3 = OTHER (*Specify*) Intermediate

5. PLANT HEIGHT:

[ ][ ] CM. *SHORTER* THAN . . . . . [ ]
[0][1] CM. *TALLER* THAN . . . . . [4]

1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213
4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1
7 = LANKART 57 8 = OTHER (*Specify*) _____

6. MAIN STEM:

[3] 1 = LAX 2 = ASCENDING 3 = ERECT

[ ] CM. TO FIRST FRUITING BRANCH

[ ][ ] NO. OF NODES TO FIRST FRUITING BRANC (*from cotyledonary node*)

7. LEAF:

[1][6] CM. WIDTH OF WIDEST LEAVES AT MATURITY

8. LEAF PUBESCENSE:

[5] 1 = GLABROUS (HAIRS AS SPARSE AS D_2 SMOOTH)
2 = SMOOTH LEAF (DELTAPINE SMOOTH LEAF) 3 = PUBESCENT (STONEVILLE 213)
4 = HEAVY PUBESCENCE (H_1 OR H_2) 5 = OTHER (*Specify*) Very Pubescent (Gregg 35)

9. LEAF COLOR:

[3] 1 = VIRESCENT YELLOW 2 = LIGHT GREEN 3 = DARK GREEN (*Acala-442*) 4 = RED
5 = OTHER (*Specify*) _____

10. LEAF TYPE:

[1] 1 = NORMAL 2 = OKRA 3 = SUPER OKRA 4 = OTHER (*Specify*) _____

11. FLOWER:

[2] 1 = NECTARILESS 2 = NECTARIED

[1] Petals: 1 = CREAM 2 = YELLOW [1] Pollen: 1 = CREAM 2 = YELLOW

12. FRUITING BRANCH TYPE:

[3] 1 = CLUSTER 2 = SHORT 3 = NORMAL [2] 1 = DETERMINATE 2 = INDETERMINATE

13. GOSSYPOL CONDITION:

[3] 1 = GLANDLESS 2 = REDUCED GLANDS 3 = NORMAL GLANDS
4 = OTHER (*Specify*) _____

[1] 1 = NORMAL BUD GOSSYPOL 2 = HIGH BUD GOSSYPOL

14. SEEDS:

[1][1][3] ± [2][3] SEED INDEX (*Fuzzy seed basis*)

[2] Seed Fuzz: 1 = SPARSE (GREGG 35) 2 = MODERATE (DPL-16) 3 = HEAVY (ACALA SJ-1) 4 = OTHER (*Specify*)

6.

FORM GR-470-8 (REVERSE) 80 000 80 PAYMASTER 145

15. BOLLS:

[2] Locules: 1 = 3-4, 2 = 4-5

[3 0] NO. SEEDS PER BOLL

[3 8 7] LINT PERCENT

[3 3] MM. DIAMETER

[2] Pitted: 1 = NONE, 2 = FINELY, 3 = COURSELY

[5 6 6] GRAMS SEED COTTON PER BOLL

[2] Breadth: 1 = BROADER AT BASE, 2 = BROADER AT MIDDLE

[2] Type: 1 = STORMPROOF (WESTBURN 70), 2 = STORM RESISTANT (LANKART 57), 3 = OPEN (DELTAPINE 16)

[3] Shape: 1 = LENGTH < WIDTH, 2 = LENGTH = WIDTH, 3 = LENGTH > WIDTH

16. BRACTEOLES:

[3] Breadth: 1 = LENGTH < WIDTH 2 = LENGTH = WIDTH 3 = LENGTH > WIDTH

[2] Teeth: 1 = FINE 2 = COURSE

[4] Teeth: 1 = 3-4 2 = 5-7 3 = 8-10 4 = OTHER (Specify) 10-13

17. YIELD: Compared to—

[ ] PERCENT *LESS* THAN .....

[2 9 3] PERCENT *MORE* THAN .....

[ ] [4] 1 = COKER 310 2 = DELTAPINE 16 3 = STONEVILLE 213 4 = PAYMASTER 111 5 = ACALA 1517-70 6 = ACALA SJ-1 7 = LANKART 57

18. FIBER LENGTH (Complete one or more of the following and give the means):

[ ] SPAN LENGTH 50%

[0 9 9] SPAN LENGTH 2.5%

[ ] U.H.M. LENGTH

[ ] MEAN LENGTH

[3 2] STAPLE LENGTH 32nd INCHES

[8 1] UNIFORMITY RATIO (MEAN/U.H.M.)

[4 8] UNIFORMITY INDEX (50% SPAN/2.5% SPAN)

19. FIBER STRENGTH AND ELONGATION:

[ ] 1,000 P.S.I.

[ ] ELONGATION E_1

[ ] STILOMETER T_0

[4 4 6] MICRONAIRE READING

[ ] YARN STRENGTH (Give test method)

[2 2 3] STILOMETER T_1

20. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[1] VERTICILLIUM WILT	[2] FUSARIUM WILT	[2] ROOT KNOT NEMATODE	[2] BACTERIAL BLIGHT (Race 1)
[2] BACTERIAL BLIGHT (Race 2)	[0] ASCOCHYTA BLIGHT	[0] PHYMATOTRICHUM ROOT ROT	[0] RHIZOCTONIA
[0] ANTHRACNOSE	[0] RUST	[ ] OTHER (Specify)	

21. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] BOLL WEEVIL	[0] APHID	[0] FLEAHOPPER	[0] LEAFWORM
[0] FALL ARMYWORM	[0] GRASSHOPPER	[0] LYGUS	[0] PINK BOLLWORM
[0] STINKBUG	[0] THRIP	[0] CUTWORM	[0] SPIDERMITE
[ ] OTHER (Specify)			

REFERENCES: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(1) Brown, Harry B., and J. O. Ware, 1958, Cotton, McGraw-Hill Book Company, Inc., New York.

(2) Lewis, C. F., and H. H. Ramey, Jr., 1971, 1970 Regional Cotton Variety Tests, ARS 34-130, United States Department of Agriculture.

COLORS: Nickerson's or any recognized color fan may be used to determine flower color of the described variety.

MAR 24 1980

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Micronaire values of Paymaster 145
and Tamcot SP 21. 1973 - 1978.

9211 11/5/80 → PAIRED comparisons

Texas	Micronaire values PM 145	SP 21	difference
Buckholts, 73	5.0	4.0	1.0
FROST, 73	4.6	4.5	.1
PLAINVIEW, 73	4.2	3.8	.4
	4.9	4.1	.8
	3.2	2.7	.5
	3.4	2.8	.6
	5.6	4.4	1.2
	3.1	2.6	.5
	5.3	4.6	.7
	5.2	4.5	.7
	2.3	2.6	- .3
	4.4	3.7	.7
	5.0	3.8	1.2
	4.9	4.0	.9
	3.9	2.6	1.3
	3.8	3.3	.5
	4.1	3.0	1.1
	4.4	2.8	1.6
	6.1	4.5	1.6
	5.8	4.5	1.3
	3.7	2.8	.9
	5.3	4.8	.5
Average	4.46	3.65	.81

Statistical Calculations 1/

$s^2_{\bar{d}} = .0098$ $s_{\bar{d}} = .099$ $t = 8.18^{**}$

99% confidence limits: $l_2 = .53$ $l_2 = 1.09$

1/ Data analysed as paired observations. See steel, R.D.G., and Torrie, J.H.: Principles and Procedures of Statistics. McGraw-Hill Book Co., Inc., New York. 1960. Pages 78-79.

Fiber length of Paymaster 145
and Tamcot SP 21. 1973-1978.

Fiber length (2.5 span) PM 145	SP 21	difference
.96	1.05	- .09
1.04	1.06	- .02
1.03	1.16	- .13
.95	1.00	- .05
1.05	.99	+ .06
1.04	1.08	- .04
.96	1.03	- .07
.85	1.03	- .18
1.04	1.12	- .08
.97	1.00	- .03
1.10	1.12	- .02
1.06	1.12	- .06
.88	.95	- .07
.93	.95	- .02
1.02	.99	+ .03
1.04	1.07	- .03
1.06	1.07	- .01
1.06	1.12	- .06
1.01	1.01	-
.91	.93	- .02
.99	1.03	- .04
.85	.90	- .05
Average .991	1.035	- .044

Statistical Calculations 1/

$s_{\bar{d}}^2 = .0001$ $s_{\bar{d}} = .01$ * = 4.40**

99% Confidence limits: $l_2 = .016$ $l_2 = .072$

8000080

SDC:rlf 5/01/94 (10157)

ASSIGNMENT OF PLANT VARIETY PROTECTION ACT CERTIFICATES AND APPLICATIONS

WHEREAS, CARGILL, INCORPORATED, including the CARGILL HYBRID SEEDS DIVISION ("CARGILL"), a Delaware corporation with its principal office and place of business at 15407 McGinty Road West, Wayzata, MN 55391, is the owner of the varieties, Plant Variety Protection Act ("PVPA") certificates and application identified below:

PLANT VARIETY PROTECTION CERTIFICATES

VARIETY	CERTIFICATE NO.	ISSUED
Paymaster 784	7700054	January 26, 1978
Paymaster 785	7700076	January 26, 1978
Paymaster 792	7700077	February 2, 1978
PR68	7800104	March 1, 1979
PR75	8000135	November 20, 1980
Paymaster 145	8000080	May 14, 1981
Paymaster 404	8000081	April 16, 1981
7563	8300031	September 29, 1983
Lankart 175	8400153	November 29, 1985
Lankart 511	8600086	November 28, 1986
Lankart 311	8700086	June 30, 1987
Paymaster 892	8900270	November 30, 1990
Paymaster 147	8900269	November 30, 1990
Lankart 142	9000215	April 30, 1991
Paymaster HS26	8600087	June 30, 1992 (amended)
Paymaster HS200	9000216	May 28, 1993 (amended)

PLANT VARIETY PROTECTION APPLICATION

VARIETY	APPLICATION NO.	FILED
Paymaster HS30	9200264	September 14, 1992

WHEREAS, DELTA AND PINE LAND COMPANY ("DELTA and PINE LAND"), a Delaware corporation with its principal office and place of business at 100 North Main Street, Scott, Mississippi is desirous of acquiring said varieties PVPA certificates and application and all rights, title and interest therein;